

OIPE

RAW SEQUENCE LISTING

DATE: 09/18/2001

PATENT APPLICATION: US/09/700,993

TIME: 13:15:30

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Output Set: N:\CRF3\09182001\I700993.raw

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p. 5

3 <110> APPLICANT: KOBAYASHI, KAZUO
4 TAKEUCHI, MAKOTO
5 IWAMATSU, AKIHIKO
6 YAMAMOTO, KENJI
7 KUMAGAI, HIDEHIKO
8 YOSHIDA, SATOSHI
10 <120> TITLE OF INVENTION: ENDO-BETA-N-ACETYLGLUCOSAMINIDASE GENE
12 <130> FILE REFERENCE: 081356/0154
14 <140> CURRENT APPLICATION NUMBER: 09/700,993
15 <141> CURRENT FILING DATE: 2000-11-22
17 <150> PRIOR APPLICATION NUMBER: JP98/141717
18 <151> PRIOR FILING DATE: 1998-05-22
20 <160> NUMBER OF SEQ ID NOS: 37
22 <170> SOFTWARE: PatentIn Ver. 2.1
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25 <211> LENGTH: 2369
26 <212> TYPE: DNA
27 <213> ORGANISM: Mucor hiemalis
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67 taagctacca aagatagtta ttgaagctgt taacaaagaa ggatacatct cttcaagtgg 2280
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84 1 5 10 15
86 ttt gca ctt aag tct atg aat gag ttg agg gac tgg acg cca gac gaa 96
87 Phe Ala Leu Lys Ser Met Asn Glu Leu Arg Asp Trp Thr Pro Asp Glu
88 20 25 30
90 aag ata aag ttt aac gtt tca agc gtg gca cta cag cct cgt gtg aaa 144
91 Lys Ile Lys Phe Asn Val Ser Ser Val Ala Leu Gln Pro Arg Val Lys
92 35 40 45
94 aac gcc ctg aaa cct caa tta ttg tta act cat gat atg gca gga gga 192
95 Asn Ala Leu Lys Pro Gln Leu Leu Leu Thr His Asp Met Ala Gly Gly
96 50 55 60
98 tat aaa gaa gat aaa aat att caa gga aac aat tat aaa gac att tat 240
99 Tyr Lys Glu Asp Lys Asn Ile Gln Gly Asn Asn Tyr Lys Asp Ile Tyr
100 65 70 75 80
102 aac att caa tat tgg cat tta gct gat act ttt gta tat ttc tct cat 288
103 Asn Ile Gln Tyr Trp His Leu Ala Asp Thr Phe Val Tyr Phe Ser His
104 85 90 95
106 gag cga gtt agc att cct cca gtc aat tgg aca aat gct tgt cat aga 336
107 Glu Arg Val Ser Ile Pro Pro Val Asn Trp Thr Asn Ala Cys His Arg
108 100 105 110
110 aat ggt gta aag tgt tta ggt act ttt tta gta gaa gga aat aac caa 384
111 Asn Gly Val Lys Cys Leu Gly Thr Phe Leu Val Glu Gly Asn Asn Gln
112 115 120 125
114 atg cat gaa atg gaa gcc ttg ctt cac ggt cca cct tta ctt aat aac 432
115 Met His Glu Met Glu Ala Leu Leu His Gly Pro Pro Leu Leu Asn Asn
116 130 135 140
118 act gac gac cct atg aga tta tgg agt ccg tat tat gca gac caa tta 480
119 Thr Asp Asp Pro Met Arg Leu Trp Ser Pro Tyr Tyr Ala Asp Gln Leu

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124					165					170				175					
126	gaa	tgc	gaa	ttc	ttt	cct	ttt	cct	aca	aat	cca	aaa	ttc	aaa	gct	gaa		576	
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131	Glu	Leu	Ala	Lys	Phe	Leu	His	Tyr	Phe	Lys	Glu	Lys	Leu	His	Asn	Glu			
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138	gaa	atc	cac	tgg	cag	aac	cag	ctc	aca	tgg	aaa	aat	gag	tta	ttt	ttt		720	
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181	aga	gga	aag	aga	tta	ctt	tct	cag	cct	tgg	tcc	cat	tta	tcg	cat	caa		1248	
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191          435          440          445
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203          485          490          495
205 act ttg ttg atg aaa gat gta aag ttg aca gta gca tgt cac ttt tcg 1536
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209 tta aaa aca aac gac tca gtt aat ttc ttc aag gta tgg cag cca gat 1584
210 Leu Lys Thr Asn Asp Ser Val Asn Phe Phe Lys Val Trp Gln Pro Asp
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239 625          630          635          640
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243          645          650          655
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247          660          665          670
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255      690      695      700
257 aat caa ttt cgt gta tct ggt tta gat att att tta tct aag cta cca 2160
258 Asn Gln Phe Arg Val Ser Gly Leu Asp Ile Ile Leu Ser Lys Leu Pro
259 705      710      715      720
261 aag ata gtt att gaa gct gtt aac aaa gaa gga tac atc tct tca agt 2208
262 Lys Ile Val Ile Glu Ala Val Asn Lys Glu Gly Tyr Ile Ser Ser Ser
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283      35      40      45
285 Asn Ala Leu Lys Pro Gln Leu Leu Leu Thr His Asp Met Ala Gly Gly
286      50      55      60
288 Tyr Lys Glu Asp Lys Asn Ile Gln Gly Asn Asn Tyr Lys Asp Ile Tyr
289 65      70      75      80
291 Asn Ile Gln Tyr Trp His Leu Ala Asp Thr Phe Val Tyr Phe Ser His
292      85      90      95
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308 Glu Cys Glu Phe Phe Pro Phe Pro Thr Asn Pro Lys Phe Lys Ala Glu
309      180      185      190
311 Glu Leu Ala Lys Phe Leu His Tyr Phe Lys Glu Lys Leu His Asn Glu
312      195      200      205
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315      210      215      220
317 Glu Ile His Trp Gln Asn Gln Leu Thr Trp Lys Asn Glu Leu Phe Phe
318 225      230      235      240

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Use of n and / or Xaa has been detected in the
Sequence Listing. Review the Sequence Listing
to ensure a corresponding explanation is present
in the <220> to <223> fields of each sequence
using n or Xaa.

VERIFICATION SUMMARY

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